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| 10/820,853 | 04/09/2004 | Kazuhisa Arai | 33773M067 | 8690 |
| 441 | 7590 | 03/21/2006 | | |
| SMITH, GAMBRELL & RUSSELL, LLP 1850 M STREET, N.W., SUITE 800 WASHINGTON, DC 20036 | | | EXAMINER CADUGAN, ERICA E | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3722 | |

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/820,853

Applicant(s)

ARAI ET AL.

Examiner

Erica E. Cadugan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/9/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it contains “legalese” such as “means” or “said”. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are a number of issues in the claims with respect to 35 USC 112, second paragraph (and/or minor informality issues). Examiner will set forth examples of these below. Note that these examples are not intended to be all-inclusive lists of such occurrences, and Applicant is required to review the claims and correct any other occurrences of such issues. In the interest of furthering patent prosecution, Examiner has provided a marked-up copy of the claims that would overcome these issues (with respect to 35 USC 112, second paragraph and/or minor informalities).

There are several positively recited limitations that lack sufficient antecedent bases in the claims. A few examples of this are: “the electrodes projecting from the front surface...” in claim 1, lines 2-3 (note that no electrodes “projecting from the front surface” were previously set forth in the claim); “the chuck table positioned in the workpiece take-in/take-out area” in claim 1, lines 19-20 (note that no chuck table “positioned in the workpiece take-in/take-out area” was

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previously claimed); . This is not meant to be an all-inclusive list of such occurrences.

Applicant is required to review the claims and correct any other such occurrences of limitations lacking sufficient antecedent basis.

In each of claims 1-3, it is unclear whether the “/” in “take-in/take-out” is intended to mean “and”, “or”, or “and/or”.

There are a number of instances in the claims where an indefinite article, such as “a” or “an”, has been used to refer to a limitation that was already previously set forth in the claims, rendering it unclear whether the later occurrence is intended to be the same as or different from the earlier occurrence. For example, claim 1, lines 11-12, sets forth “a plurality of electrodes projecting from the front surface...”. However, claim 1, lines 2-3, already set forth plural electrodes projecting from the front surface, rendering it unclear whether the electrodes in lines 11-12 are intended to be the same as or different from the electrodes in lines 2-3. If, as it appears, they are intended to be the same electrodes, Examiner suggests changing “a plurality of electrodes” in lines 11-12 to --the plurality of electrodes--. Note that this is not the only occurrence of this issue in the claims.

In claim 3, the last three lines, it is unclear as claimed whether the workpiece conveying means is performing the action of placing the cassette on the cassette placing portion. Suggested clarifying language is found below in the marked-up copy of claim 3.

Marked-up copy of claims with suggestions for overcoming the aforescribed
issues with respect to 35 USC 112

Claim 1. A machine for processing electrodes formed on a plate-like workpiece to make [the] electrodes projecting from [the] a front surface of the plate-like workpiece uniform in height, comprising:

a chuck table having a placing surface for placing the plate-like workpiece, which can be moved between a workpiece [take-in/take-out] take-in and take-out area and a processing area;

a chuck table moving unit for moving the chuck table between the workpiece [take-in/take-out] take-in and take out area and the processing area;

a cutting unit having a cutting tool for cutting [a] the plurality of electrodes projecting from the front surface of the plate-like workpiece arranged in the processing area and held on the chuck table to make them uniform in height;

a cutting unit feed mechanism for moving the cutting unit in a direction perpendicular to the placing surface of the chuck table;

a take-in means for carrying the plate-like workpiece before processing to the chuck table when the chuck table is positioned in the workpiece [take-in/take-out] take-in and take out area;

and a take-out means for taking out the plate-like workpiece after processing [held on] from the chuck table when the chuck table is positioned in the workpiece [take-in/take-out] take-in and take out area.

2. The machine for processing electrodes formed on a plate-like workpiece according to claim 1, wherein the machine comprises a cassette placing portion for [placing] having placed thereon a cassette storing a plurality of the plate-like workpieces, a workpiece conveying means

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for taking out one of the plate-like workpieces before processing from [a] the cassette placed on the cassette placing portion, and a workpiece temporary storage portion for temporarily storing the plate-like workpiece carried by the workpiece conveying means, and the plate-like workpiece carried to the workpiece temporary storage portion is conveyed onto the chuck table positioned when the chuck table is in the workpiece [take-in/take-out] take-in and take-out area by the take-in means.

3. The machine for processing electrodes formed on a plate-like workpiece according to claim 2, wherein the machine comprises a cleaning means for cleaning the plate-like workpiece after processing, the plate-like workpiece after processing held on the chuck table when the chuck table is positioned in the workpiece [take-in/take-out] take-in and take-out area is carried to the cleaning means by the take-out means, and the plate-like workpiece after processing cleaned by the cleaning means is stored in a second cassette, placed on the cassette placing portion, by the workpiece conveying means.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, as best understood, are rejected under 35 USC 102(b) as being anticipated by U.S. Pat. Publication No. 2002/0004359 to Arai.

Arai teaches a machine including a “chuck table” 15 (Figure 1) on which workpieces W (see Figure 6) are held, noting that the workpiece placing surface(s) of the “chuck table” 15 are

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movable between a “processing area” where the workpieces W mounted thereon can be machined via, for example, grinding wheel 120 or grinding wheel 122, and a “take-in/take-out” area where workpieces can be moved thereto or therefrom via either the workpiece take-in means 37 or the workpiece take-out means 38, respectively (see Figure 1, also paragraph 0026, for example). Note that the grinding wheels can be moved in the vertical direction (which is perpendicular to the “placing surface” of the “chuck table” 15, see Figure 1) via feeding units 11 and 13, for example.

Re claim 2, note that “workpiece conveying means” 36 removes workpieces W from cassette 31, and that “temporary storage portion” 32 temporarily stores the workpiece carried by the conveying means 36 (Figure 1, also paragraph 0026), and a workpiece W is conveyed from temporary storage portion 32 to the “chuck table” 15 via the “take-in means” 37 (see Figure 1, also paragraph 0026).

Re claim 3, take-out means 38 places the processed workpieces in the cleaning means 33, and “workpiece conveying means” 36 is used to move the cleaned workpiece from the cleaning means 33 to a storage “cassette” 34 (Figure 1, paragraph 0026).

Re the “cutting tool”, it is noted that the either of the grinding tools taught by Arai are considered “cutting tools” as broadly claimed, noting that no distinguishing structure of the cutting tool has been provided in the claims, and noting that abrasive or grinding tools are broadly considered “cutting tools”, as evidenced by at least U.S. Pat. No. 6,238,280 to Ritt et al. (see title and abstract) and U.S. Pat. No. 6,273,805 to Sunagawa (col. 2, lines 55-59), for example. See also line 14 of paragraph 0023, for example, which refers to the “cutting” depth of the grinding tool.

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Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-5, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. Publication No. 2002/0004359 to Arai.

Arai teaches all aspects of the claimed invention as described above, but does not teach the “fluid supply means” (claim 4) that provides “ionized air” (claim 5).

However, Examiner takes Official Notice that the provision of a fluid supply means to a machining operation such that ionized air is provided to the workpiece at the time of machining in order to neutralize any static electricity created during the machining process is well-known in the art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided such a fluid supply means supplied with ionized air, as is known in the art, to the device taught by Arai such that the ionized air was supplied to the workpiece on the chuck table 15 at the time of machining for the well-known purpose of neutralizing any static electricity created during the machining process.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erica E. Cadugan whose telephone number is (571) 272-4474.

The examiner can normally be reached on M-F, 6:30 a.m. to 4:00 p.m., alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer D. Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Erica E Cadugan
Primary Examiner
Art Unit 3722

eec
March 15, 2006